RESPONSE UNDER 37 C.F.R. § 1.111

Application No.: 10/524,259

Attorney Docket No.: Q86191

REMARKS

Claims 1-39 are pending. Claims 28-31 are allowed; claims 1-8, 10-27 and 32-39 are

rejected; and claim 9 is objected to as being allowable if rewritten in independent form. Claim 1

is directed to a photo-curable composition comprising (a) a curable fluorine-containing polymer

(I) and (b) a photoacid generator (II). Claims 2-8 and 10-13 further characterize the photo-

curable composition of claim 1, and claims 14-27 and 32-39 are drawn to cured products of the

composition of claim 1.

Review and reconsideration on the merits are requested.

Claims 1-8, 10-27 and 32-39 stand rejected under 35 U.S.C. § 103(a) as being

unpatentable over U.S. Patent No. 6,069,215 to Araki et al (Araki '215) in view of U.S. Patent

No. 6,790,587 to Feiring et al (Feiring '587). The grounds for rejection remain the same as set

forth in the previous Office Action.

Namely, Araki '215 was cited as disclosing a coating composition comprising a fluorine-

containing polymer derived from fluorine-containing monomers having epoxy functional groups.

Feiring '587 was cited as teaching addition of a photoacid generator to an analogous fluorinated

polymer. The reason for rejection was that it would have been obvious to add a photoacid

generator to the fluorinated polymer composition of Araki '215 as taught by Feiring '587, so as

to facilitate development by producing hydrophilic acid groups upon exposure to radiation and

deprotection.

Applicants traverse, and respectfully request the Examiner to reconsider for the following

reasons.

Araki '215 discloses a fluorine-containing polymer having a functional group, such as an

epoxy group, so as to impart excellent adhesive strength to a substrate such as metal or glass.

2

RESPONSE UNDER 37 C.F.R. § 1.111 Attorney Docket No.: Q86191

Application No.: 10/524,259

The Examiner was of the view that "There is no evidence of record to show that the products obtained from the instantly claimed compositions containing a photoacid generator are unexpectedly different from the cured products obtained from the fluorine-containing and epoxy group-containing polymers taught by Araki '215." (Office Action at pg. 2).

According to Araki '215, a fluorine-containing polymer (PFA) having a functional group is sintered (heated) at 380°C for 20 minutes (e.g., Example 1). See also Araki '215 at col. 15, lines 14-24. That is, the coating composition of Araki '215 is coated onto a substrate and then sintered. However, Araki '215 is silent and has no disclosure as to a photo-curing system employing a photo-curing agent (photoacid generator).

Feiring '587 discloses a photoresist composition comprising a fluorine-containing polymer having a protected acidic group (e.g. carboxylic acid ester group) and a photoactive component (corresponding to the photoacid generator of the present invention).

As shown in the Declaration under 37 CFR 1.132 submitted together with the Response file April 4, 2008, the physical properties of the coating film obtained by Feiring '587 demonstrate that the photoactive component of Feiring '587 cannot act as a curing agent and that the resulting product was not cured. This is because the film after UV irradiation was completely dissolved in ethyl acetate and aqueous KOH solution. See Table 1 of the Declaration, reproduced at page 5 of the Response filed April 4, 2008. Namely, the composition of Feiring '587 is not a photo-curable composition.

Accordingly, since the photoactive component does not act as a photo-curing agent in Feiring '587 and because Araki '215 makes no mention of a photo-curing system, there is no apparent reason, motivation or suggestion to one of ordinary skill to include a photoactive

3

RESPONSE UNDER 37 C.F.R. § 1.111

Application No.: 10/524,259

Attorney Docket No.: Q86191

component (photoacid generator) in the coating composition of Araki '215 (which is sintered

after applying to a substrate) so as to prepare a photo-curable resin composition of the invention.

For the above reasons, it is respectfully submitted that the present claims are patentable

over Araki '215 in view of Feiring '587, and withdrawal of the foregoing rejection under 35

U.S.C. § 103(a) is respectfully requested.

Withdrawal of all rejections and allowance of claims 1-39 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance the prosecution

of this application, the Examiner is invited to contact the undersigned at the local Washington,

D.C. telephone number indicated below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

SUGHRUE MION, PLLC

Telephone: (202) 293-7060

Facsimile: (202) 293-7860

WASHINGTON OFFICE

233/3

CUSTOMER NUMBER

Date: August 5, 2008

Abraham J. Rosner

Registration No. 33,276